

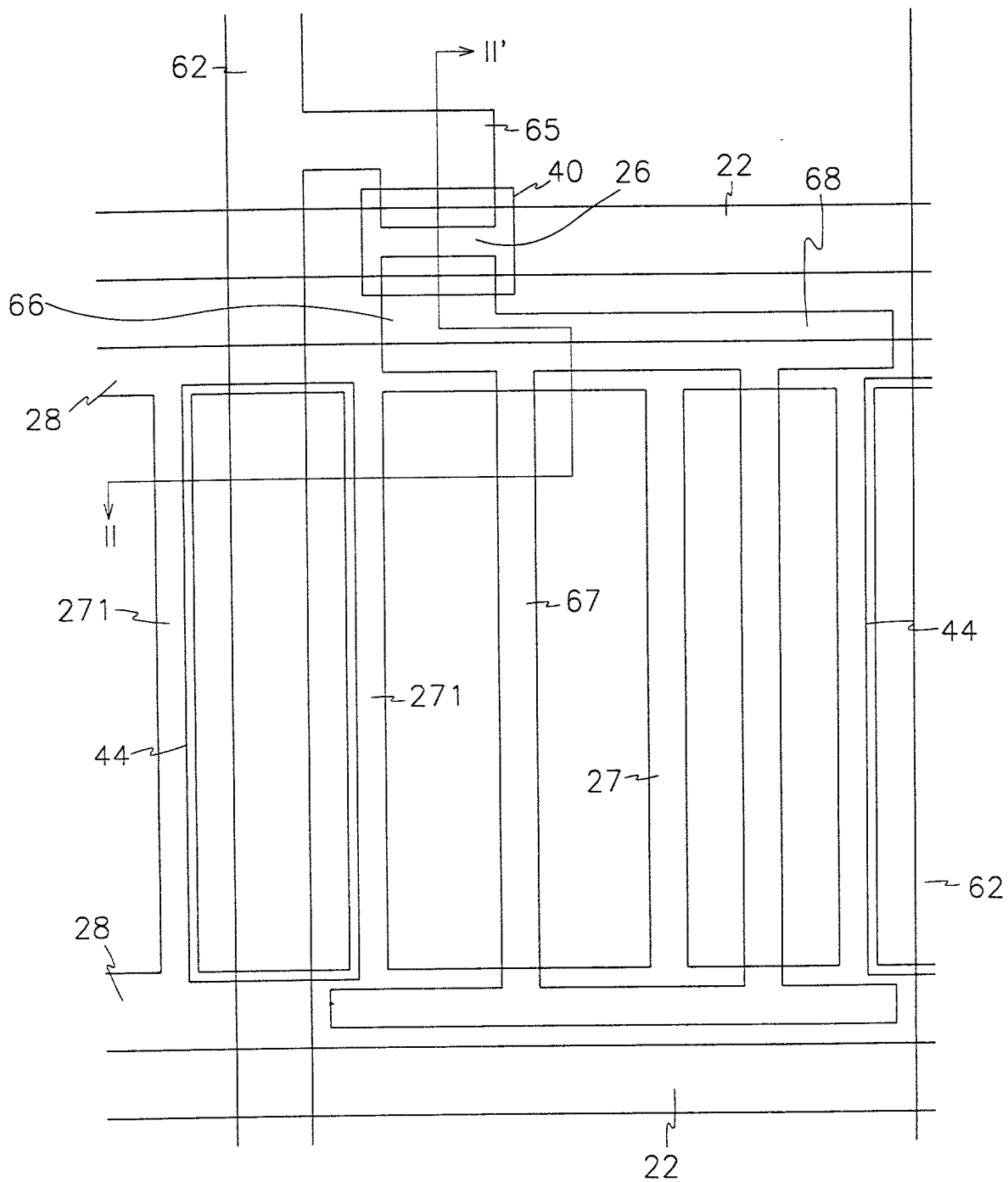
[illegible]

FIG. 2

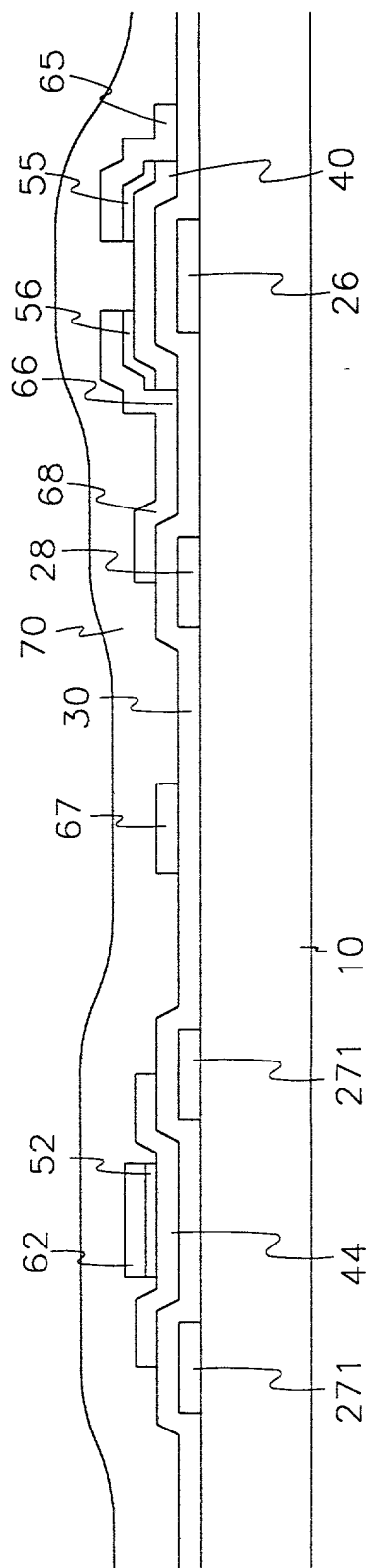


FIG. 3A

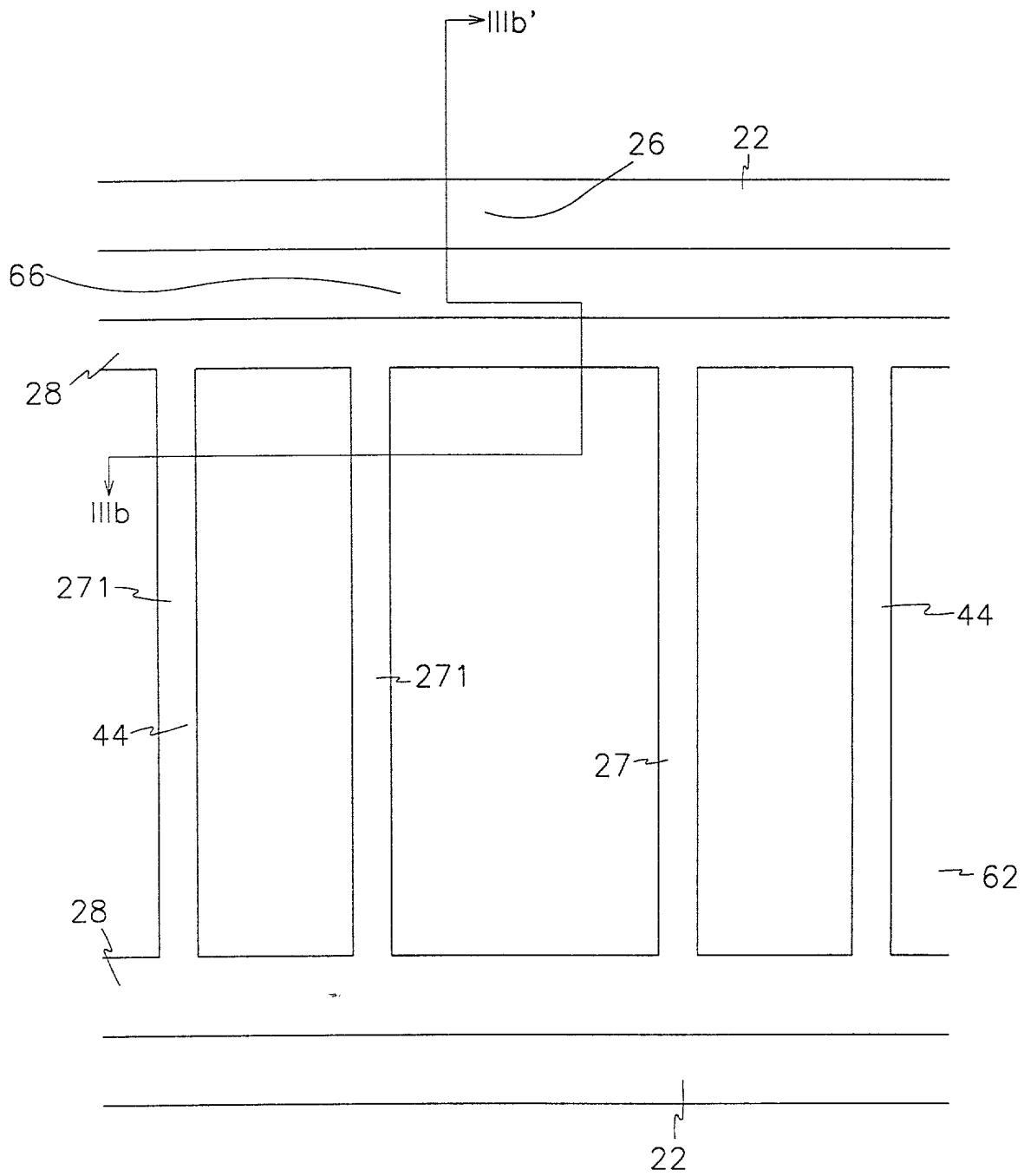
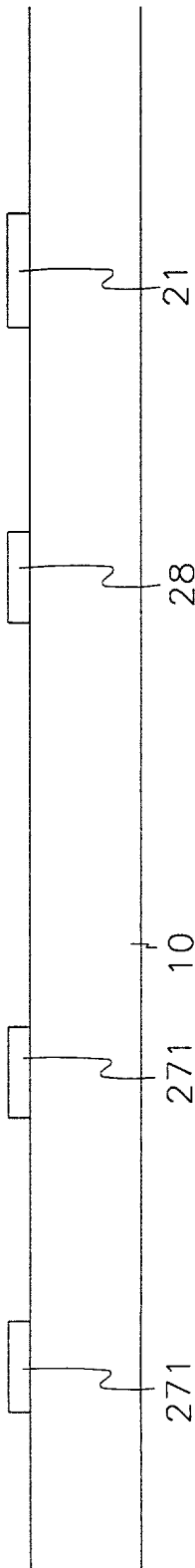


FIG. 3B is a cross-sectional view of the device of FIG. 3A, taken along line 3-3 of FIG. 3A. The device includes a substrate 10, a gate stack 20, a gate electrode 21, a gate insulator 28, a gate contact 271, and a gate terminal 271.

FIG. 3B



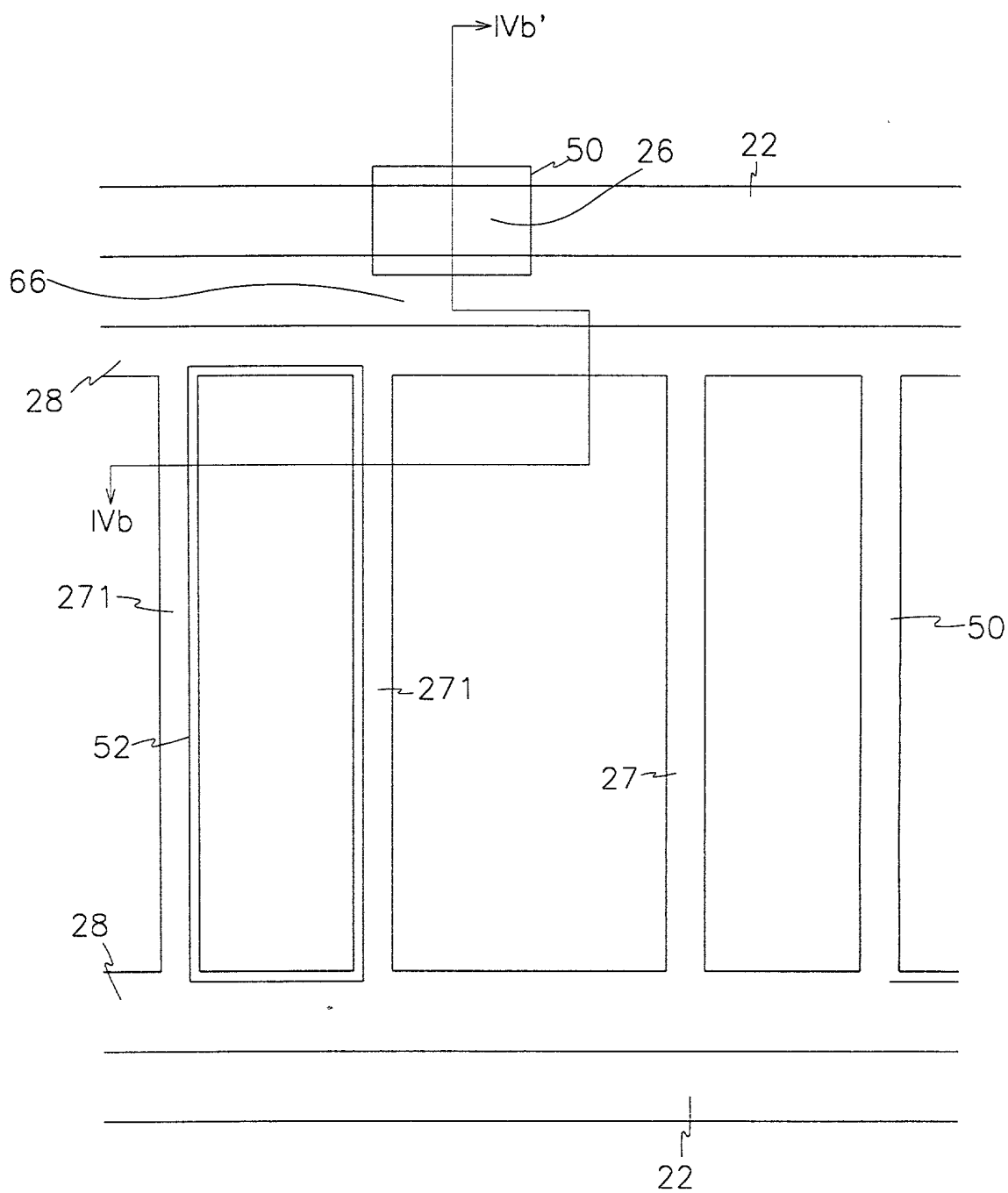
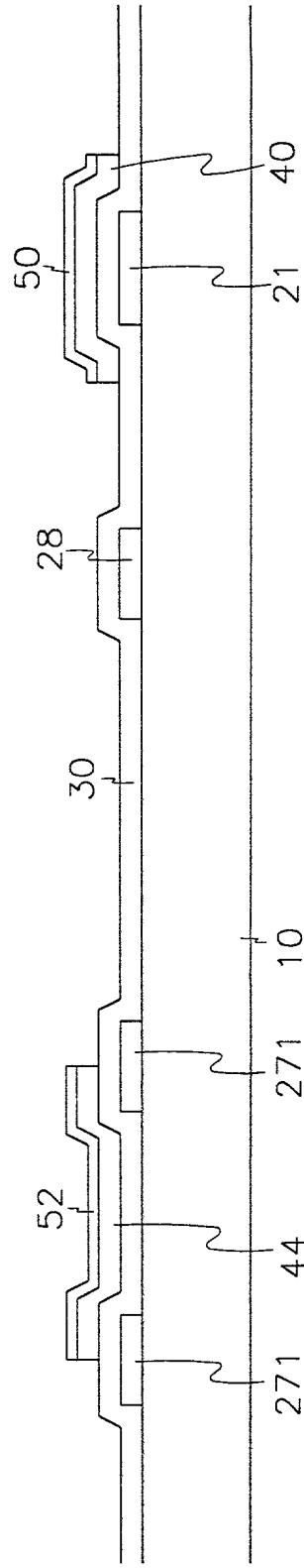
[illegible]

FIG. 4B



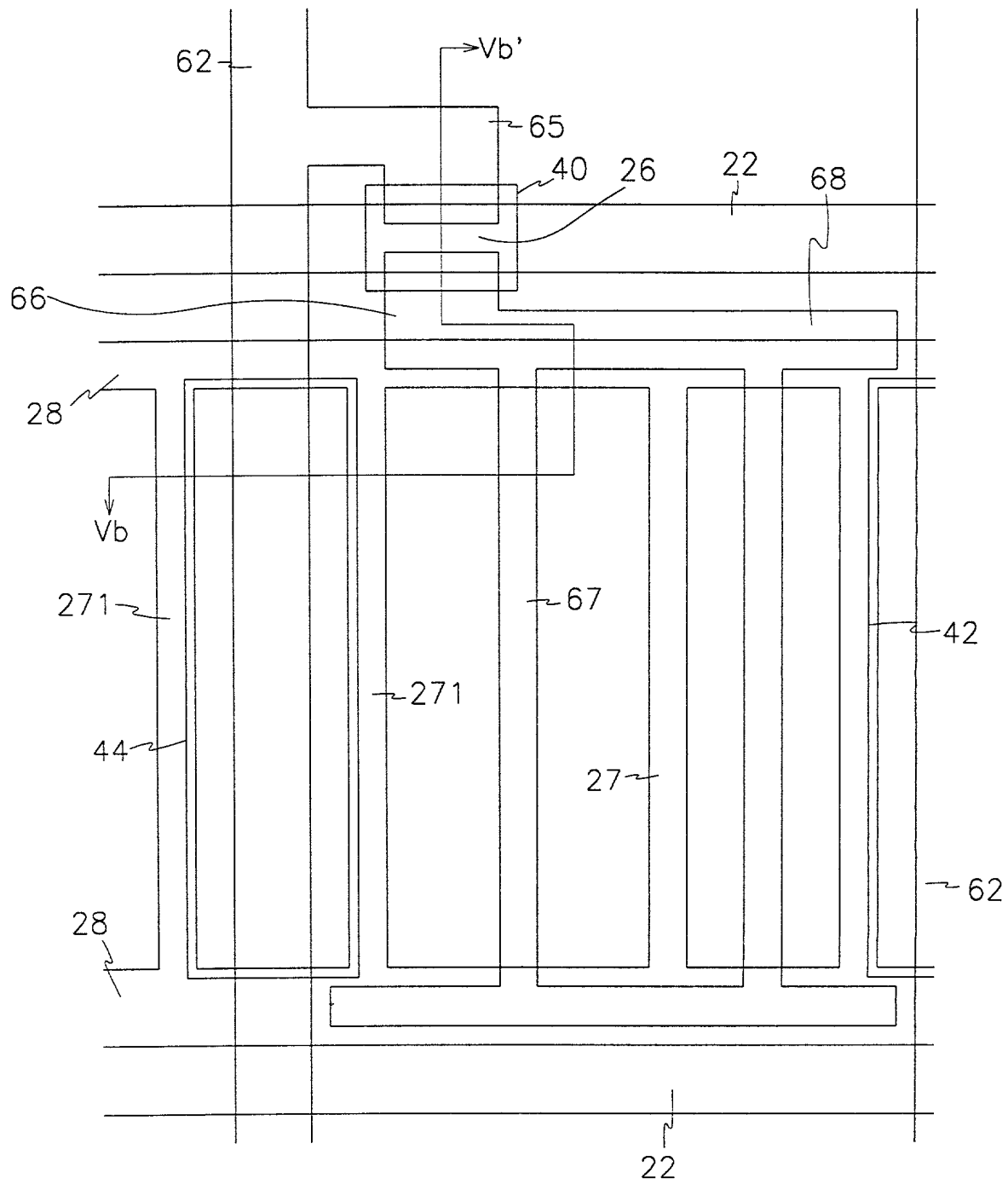
[illegible]

FIG. 5B

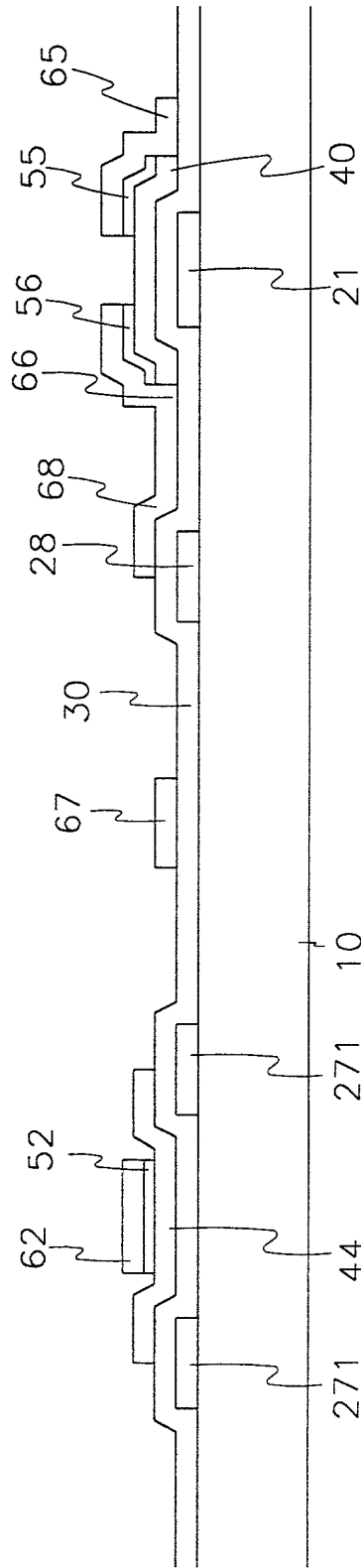




FIG. 6

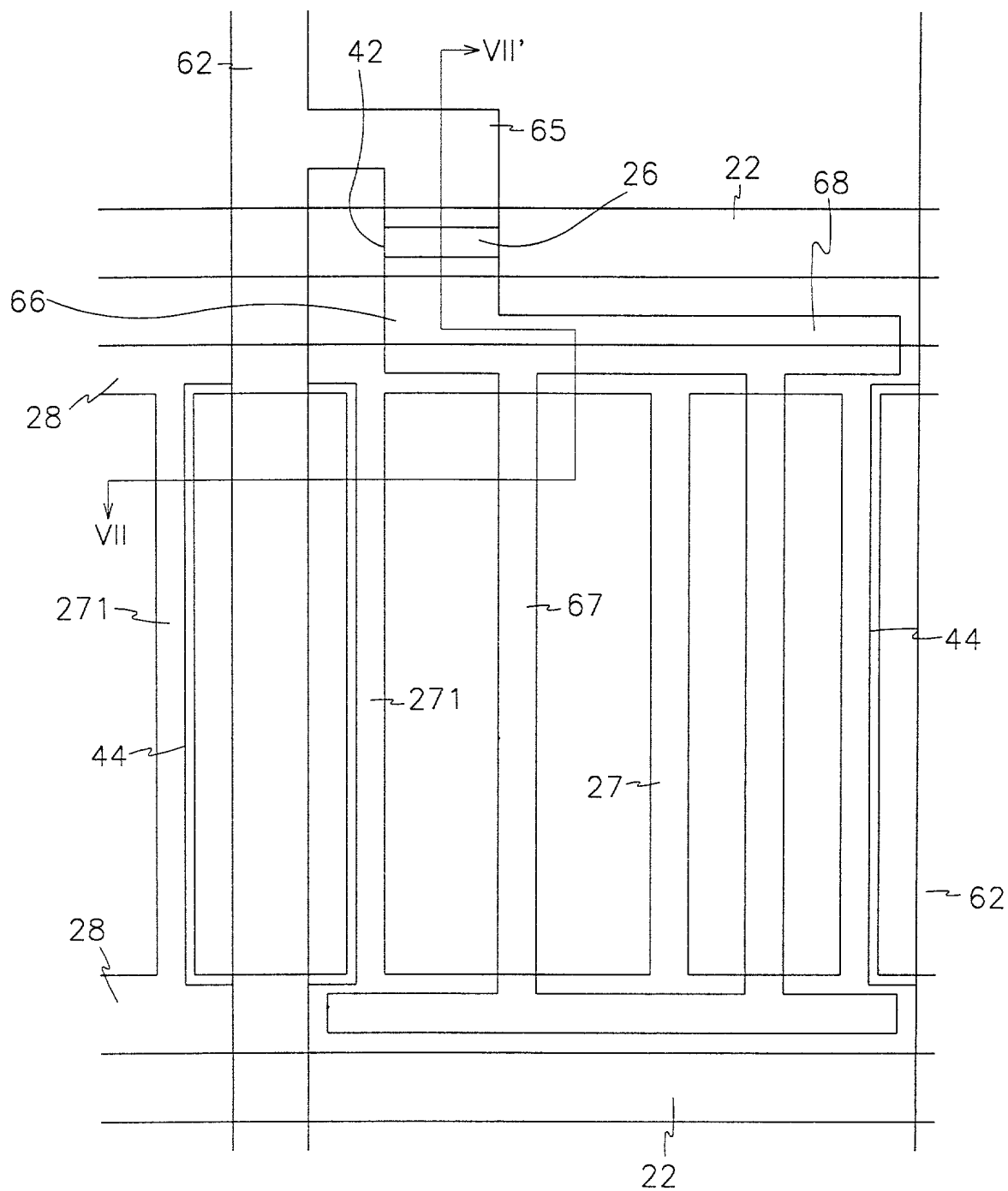


FIG. 7

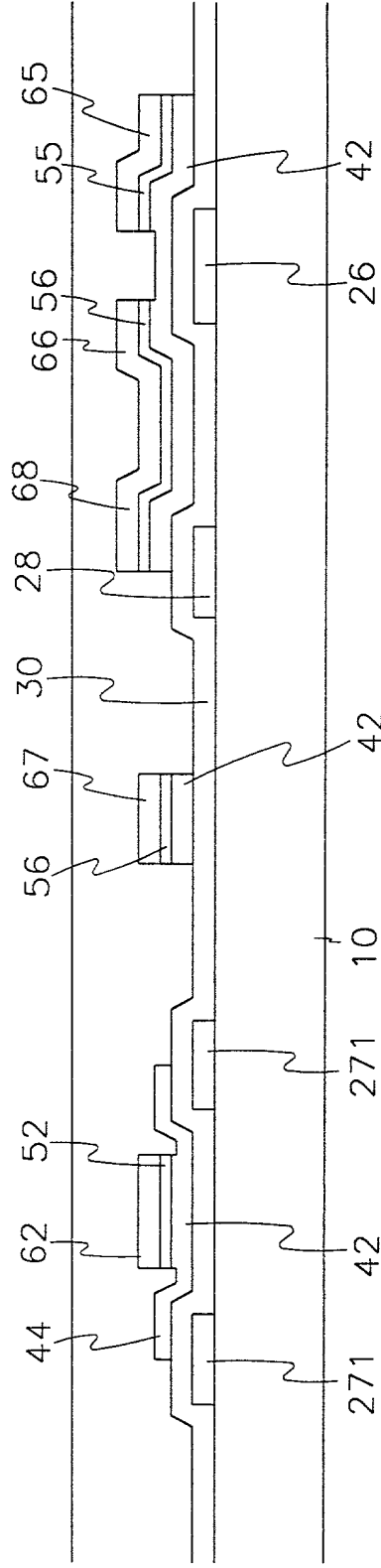


FIG. 8 is a cross-sectional view of a semiconductor device in accordance with the present invention. The device includes a substrate 10, a gate stack 26, and a channel region 28. The gate stack 26 is formed on the substrate 10 and includes a gate dielectric layer 40 and a gate conductive layer 44. The channel region 28 is formed in the substrate 10 and is defined by the gate stack 26. The channel region 28 is doped with a dopant 50. The device also includes a source region 60 and a drain region 110. The source region 60 and the drain region 110 are formed in the substrate 10 and are defined by the gate stack 26. The source region 60 is doped with a dopant 271, and the drain region 110 is doped with a dopant 271. The device is a MOSFET (Metal-Oxide-Semiconductor Field-Effect Transistor).

FIG. 8

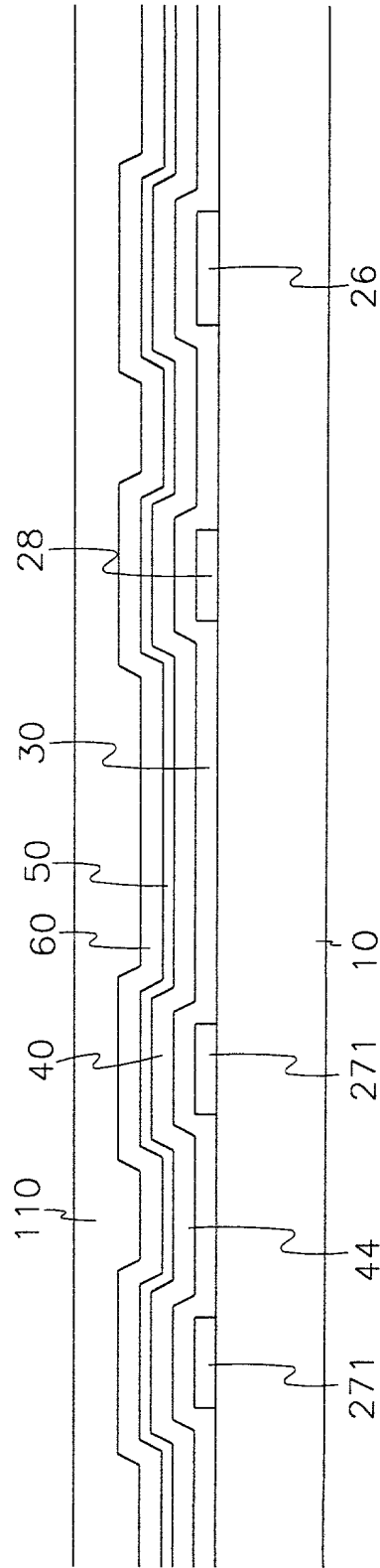


FIG. 9 is a cross-sectional view of a semiconductor device in accordance with the present invention. The device includes a substrate 10, a gate stack 20, and a channel region 30. The gate stack 20 includes a gate dielectric layer 22 and a gate electrode layer 24. The channel region 30 is formed in the substrate 10 and is adjacent to the gate stack 20. The device also includes a source region 40 and a drain region 60. The source region 40 is formed in the substrate 10 and is adjacent to the channel region 30. The drain region 60 is formed in the substrate 10 and is adjacent to the channel region 30. The device further includes a first contact layer 112, a second contact layer 114, and a third contact layer 116. The first contact layer 112 is formed on the source region 40, the second contact layer 114 is formed on the channel region 30, and the third contact layer 116 is formed on the drain region 60. The device is shown in cross-section along a line A-A.

FIG. 9

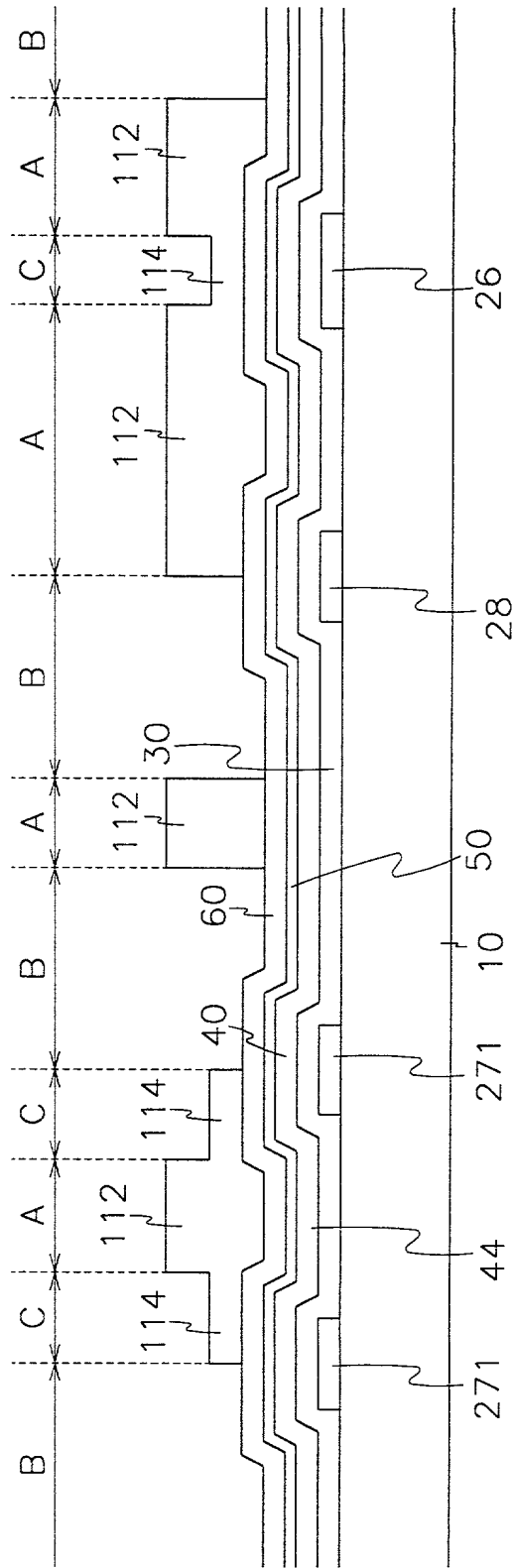
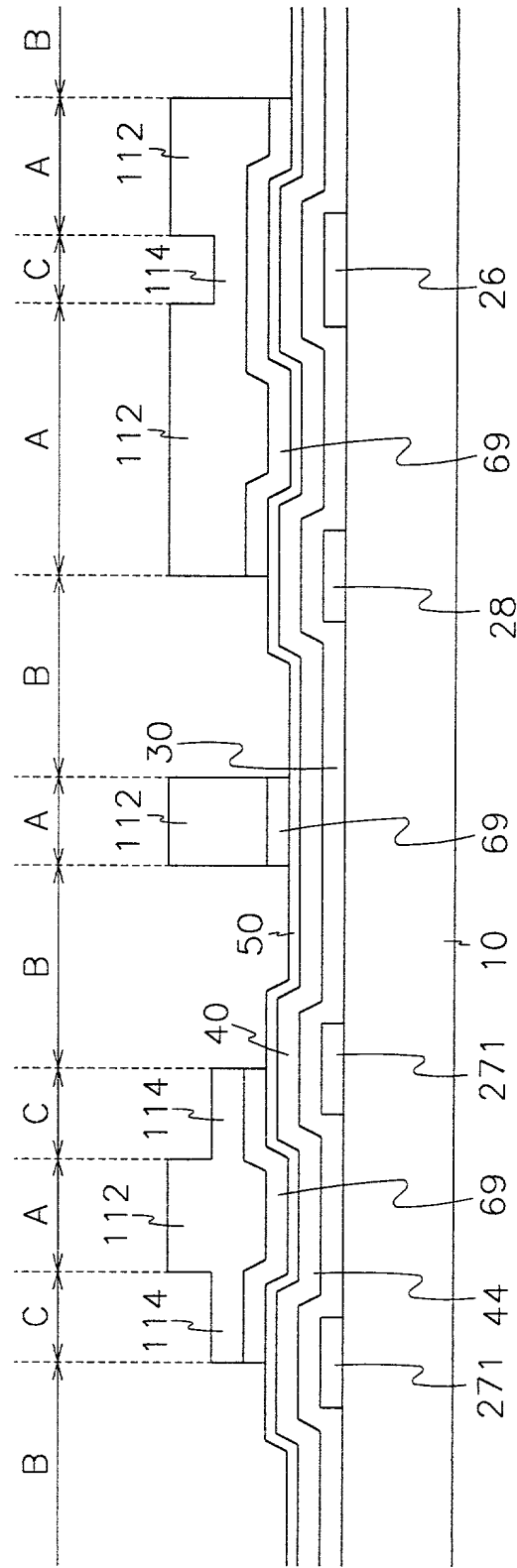


FIG.10



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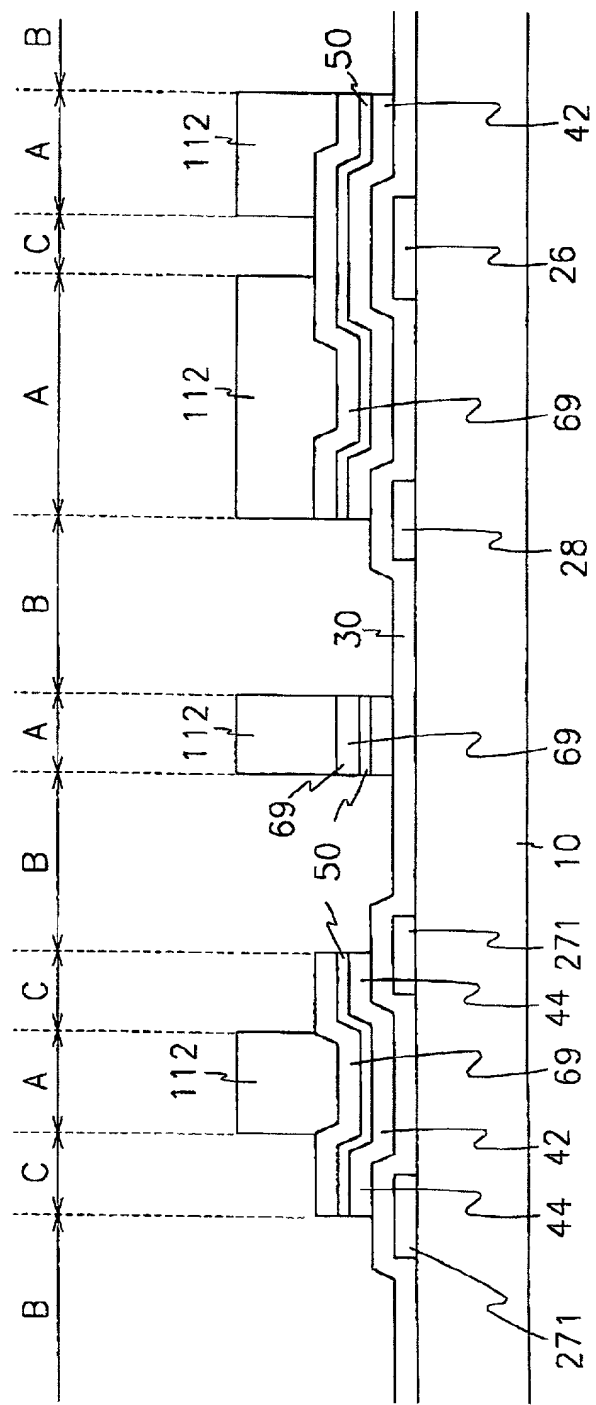


FIG.12

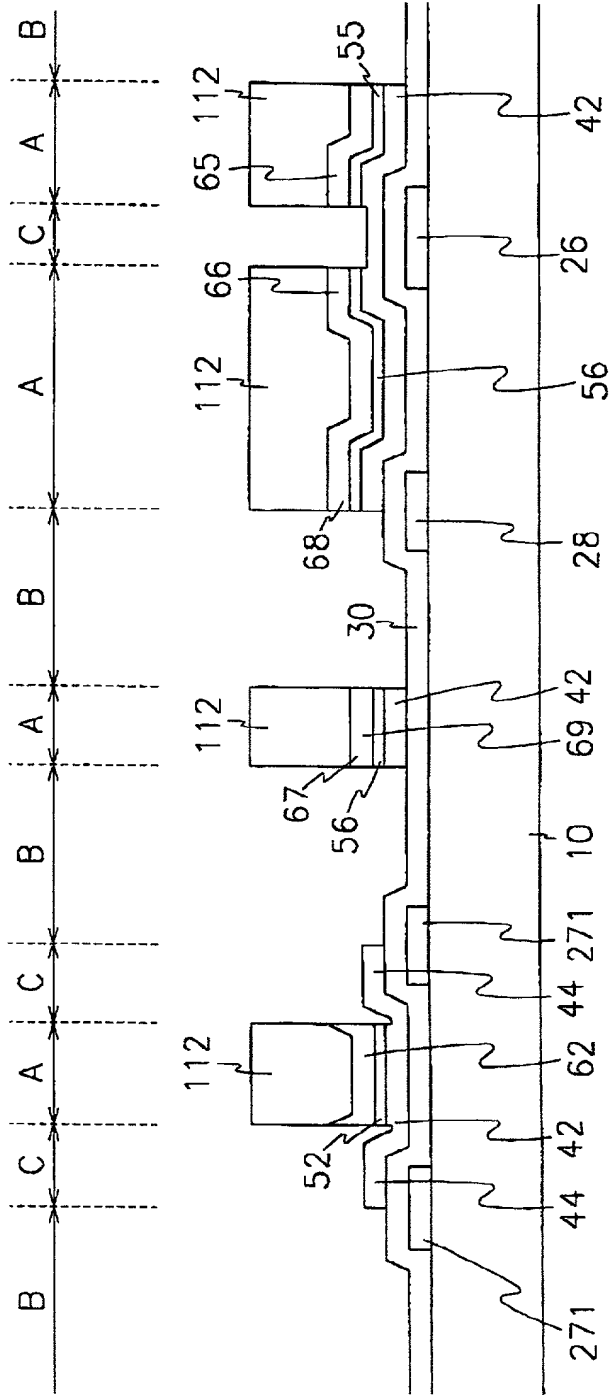


FIG.13

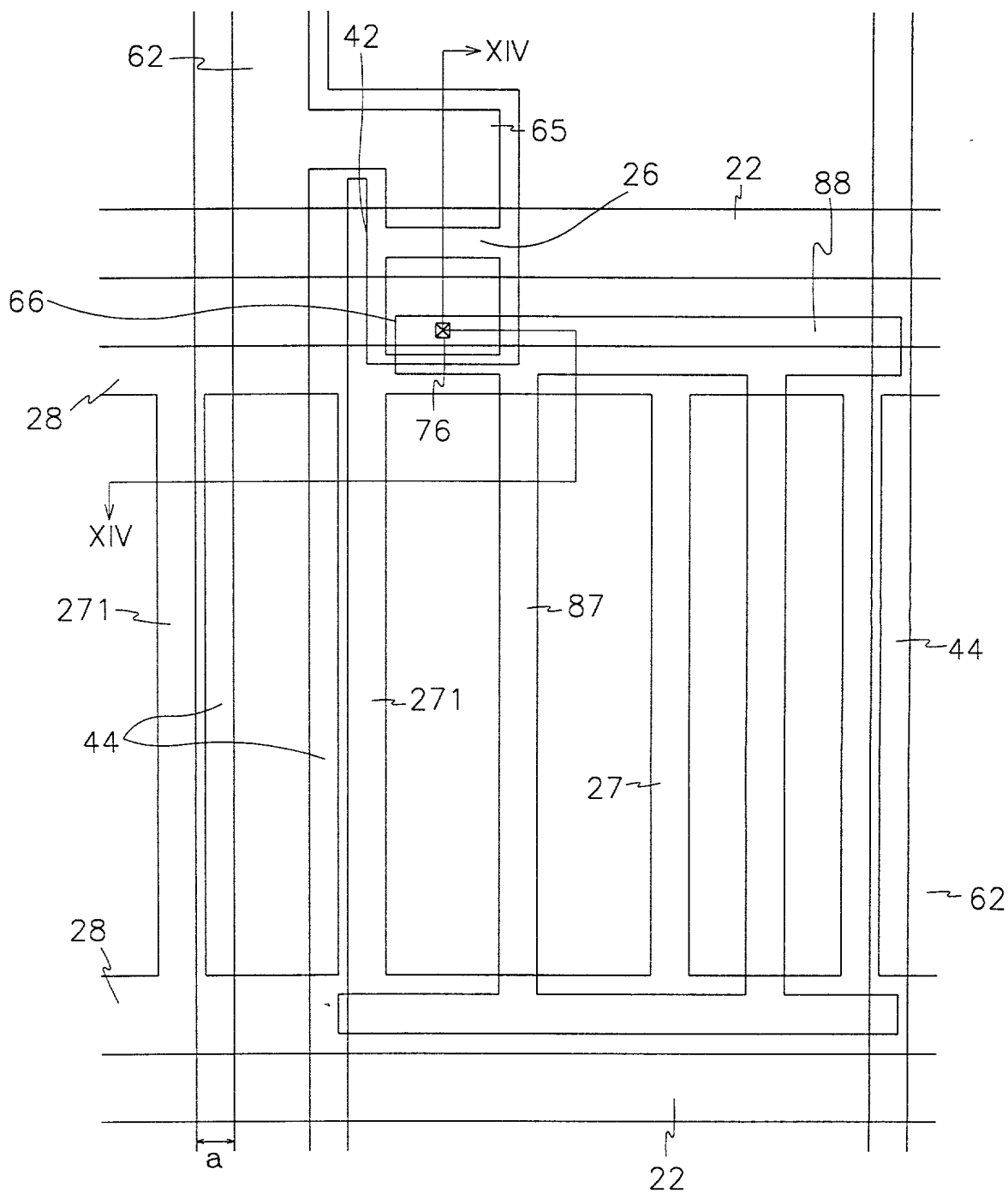




FIG.14

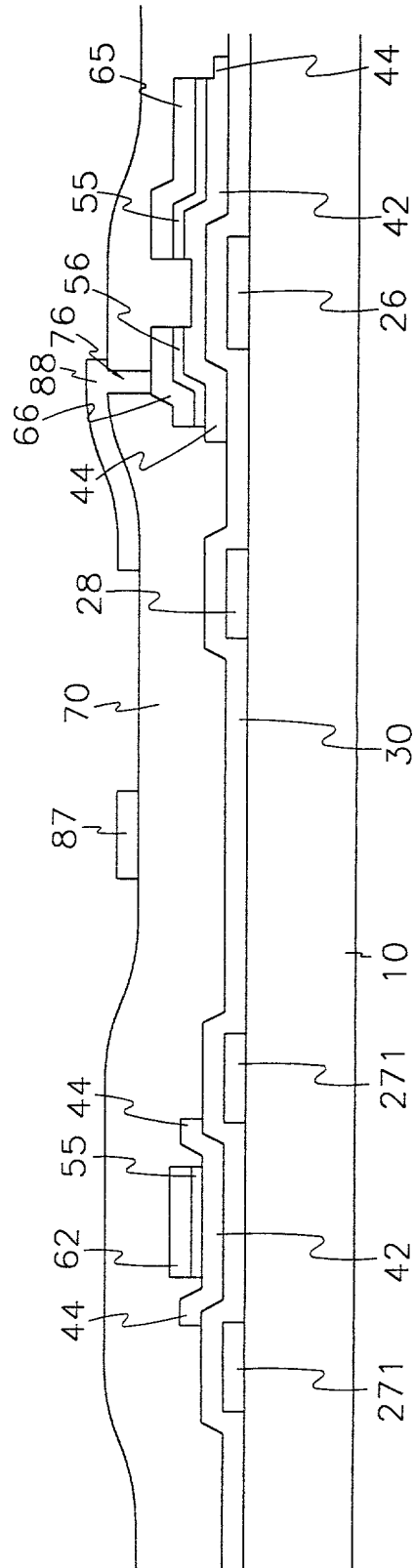
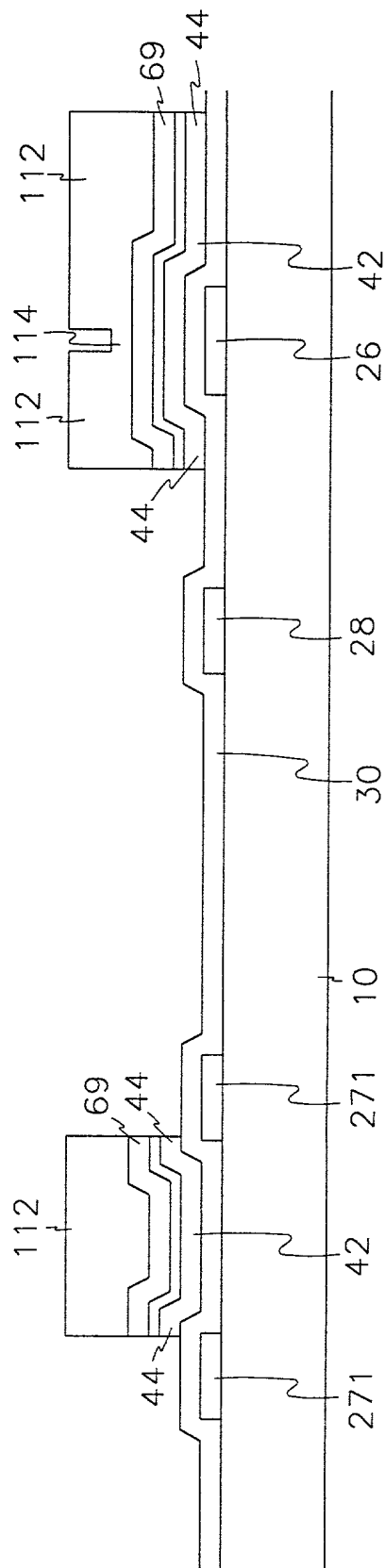


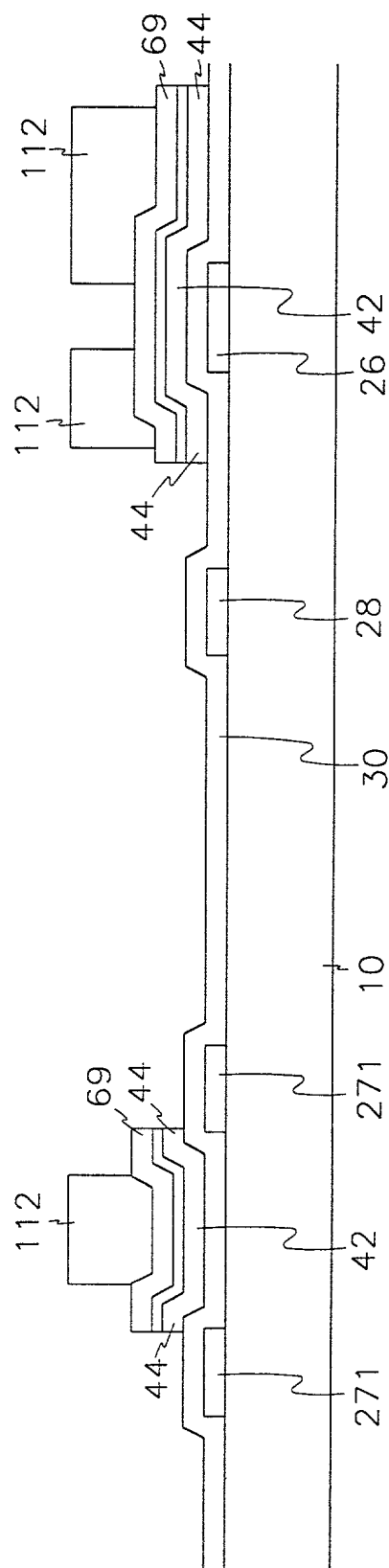


FIG.16



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	

FIG. 17



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FIG.18A

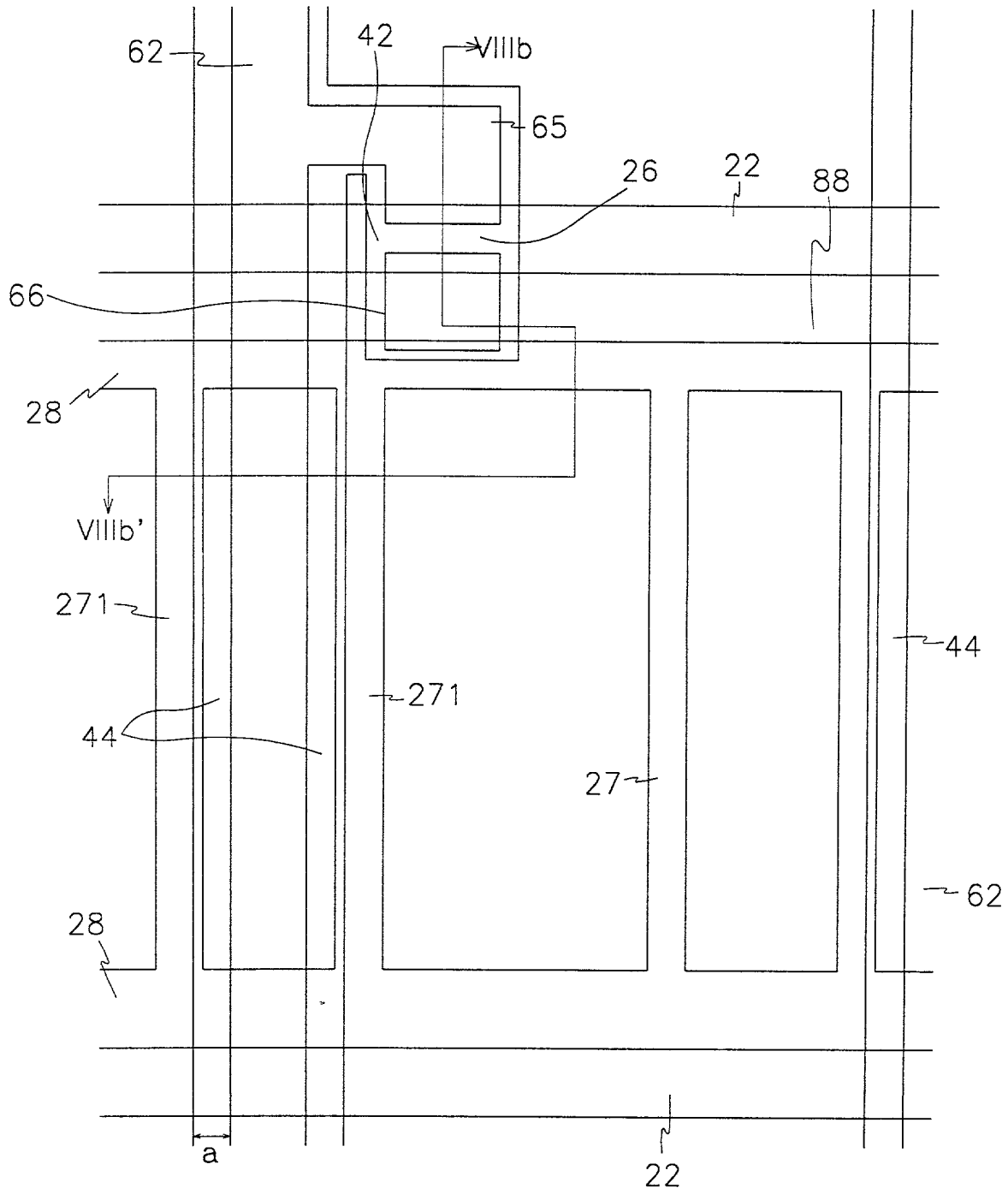


FIG. 18B

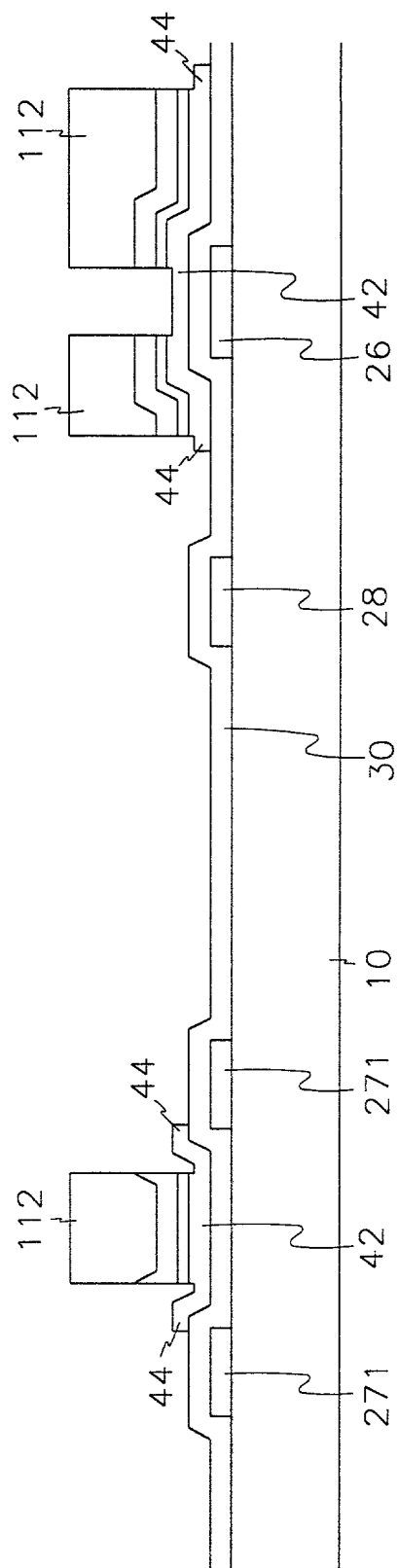


FIG. 19A

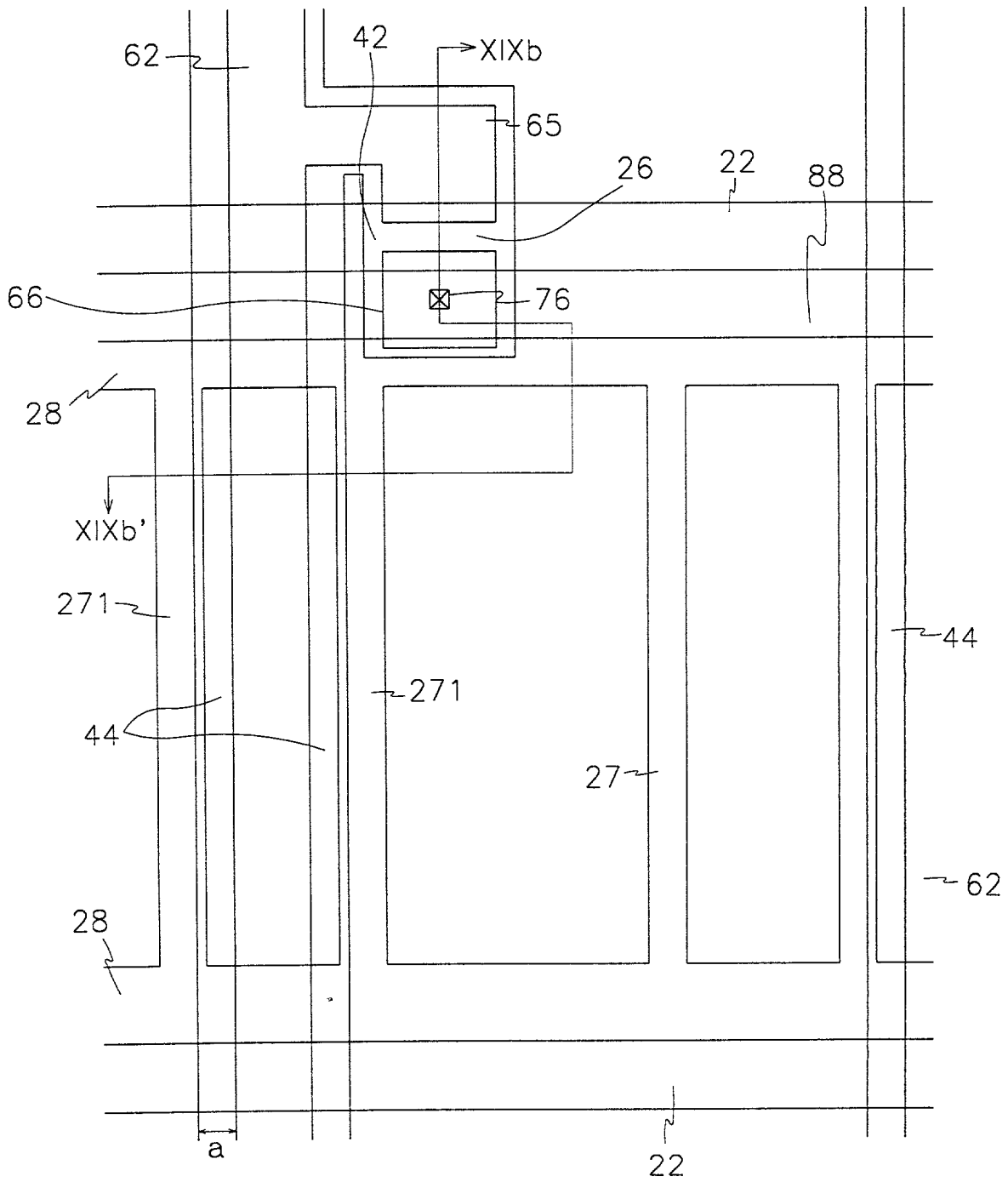


FIG. 19B

